

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matter of	)	
	)	
Misuse of Internet Protocol (IP) Captioned Telephone Service	)	CG Docket No. 13-24
	)	
Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities	)	CG Docket No. 03-123
	)	

To: The Commission

**COMMENTS OF HAMILTON RELAY, INC.**

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Exhibit 1 - Consortia Report

## **SUMMARY**

The August 26, 2013 *Further Notice of Proposed Rulemaking* (“*Further Notice*”) in this proceeding continues the Commission’s efforts to refine the ways in which it regulates the Internet Protocol Captioned Telephone Service (“IP CTS”) industry, and builds on the interim IP CTS rules adopted earlier this year. As a provider of IP CTS nationwide, Hamilton Relay, Inc. (“Hamilton”) supports the Commission’s efforts to improve IP CTS.

As the Commission does so, however, it must keep in mind the ultimate goals of protecting consumers and maintaining the integrity of the TRS Fund. A number of the proposals set forth in the *Further Notice* will accomplish those goals; however, others will not as shown in these comments. The Commission should prioritize enforcing its existing minimum mandatory standards, adopting sensible new IP CTS-specific minimum mandatory standards, and relieving the consumer burdens that have resulted from a strict application of the default captions-off requirement.

It is particularly unnecessary to engage in a counterproductive review of the IP CTS rate methodology, because the current MARS methodology has proven over time to be the most effective, least administratively burdensome, and competitively based representation of providers’ reasonable costs for providing IP CTS.

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Hamilton Relay, Inc. (“Hamilton”), by its counsel, hereby submits these comments in response to the August 26, 2013 *Further Notice of Proposed Rulemaking* regarding Internet Protocol Captioned Telephone Services (“IP CTS”). As a provider of IP CTS nationwide to hard-of-hearing individuals who rely daily on this critical service, Hamilton supports the Commission’s efforts to improve IP CTS. In this regard, Hamilton believes that the Commission should continue to focus on measures that directly benefit users of the service, rather than spending resources adjusting the current IP CTS rate methodology which has proven to be a rational and predictable method over time.

**I. MARS IS A PROVEN, RATIONAL RATEMAKING METHODOLOGY THAT SHOULD CONTINUE TO BE USED FOR IP CTS**

The Commission should reaffirm its commitment to the Multistate Average Rate Structure (“MARS”) methodology in the context of IP CTS ratemaking. MARS has served the

public interest well since its adoption in 2007.<sup>1</sup> As the Commission predicted then, the MARS approach has “simplif[ied] the rate setting process and result[ed] in more predictable, fair, and reasonable rates.”<sup>2</sup> MARS “result[s] in a rate that reflects the reasonable costs of providing service based on the rates states pay through competitive bidding for the same, *albeit* intrastate, service,” and “avoids the necessity of detailed analysis (and possible disallowance) of the projected cost and demand data for each provider, as such data will no longer be required to be filed by the providers of these services.”<sup>3</sup> The MARS methodology is superior to its alternatives chiefly because it relies on the competitive market, rather than prescriptive regulation and proxies, to set rates.<sup>4</sup> The Commission has explained repeatedly, and in various contexts, that “rate regulation can only be, at best, an imperfect substitute for market forces,”<sup>5</sup> and “cannot replicate the complex and dynamic ways in which competition will affect [providers’] prices, service offerings, and investment decisions.”<sup>6</sup> MARS mirrors competitive prices by basing interstate CTS and IP CTS rates on competitively bid intrastate CTS rates, obviating the complexities inherent in rate-of-return or price-cap ratemaking while relying on providers’ strong incentives to estimate their costs accurately in the competitive bidding process.

Moreover, MARS has remained free of the problems that have plagued other ratemaking methodologies employed for other forms of relay. For example, as the Commission has

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<sup>1</sup> *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Declaratory Ruling, 22 FCC Rcd 20140 (2007) (“*MARS Order*”).

<sup>2</sup> *Id.* at 20150 ¶ 16.

<sup>3</sup> *Id.* at 20157 ¶ 35 (citations omitted). In 2013, the TRS Fund Administrator began collecting such data for informational purposes, but that action does not affect the MARS reimbursement rate methodology.

<sup>4</sup> Sorenson concedes that “the MARS plan yields rates anchored in market-based determinations.” Petition for Rulemaking of Sorenson Communications, Inc. and CaptionCall, LLC, CG Docket No. 03-123, at 2 (filed Feb. 20, 2013) (“*Sorenson Petition*”).

<sup>5</sup> *Access Charge Reform*, First Report and Order, 12 FCC Rcd 15982, 16107 ¶ 289 (1997).

<sup>6</sup> *Id.*

recognized, its early approach to Video Relay Services (“VRS”) ratemaking failed to promote efficiency, and thus resulted in waste, fraud, and abuse, as well as “compensation rates that ... bec[a]me inflated well above actual cost.”<sup>7</sup> This problem has necessitated an ongoing effort to correct for past errors and bring VRS rates closer to cost.<sup>8</sup> Likewise, the price cap approach applied to IP Relay services has also led to substantial problems – most significantly, a 20% reduction in rates between 2012-2013 (\$1.2855 per minute) and 2013-2014 (\$1.0391 per minute) due to a wildly fluctuating and unpredictable efficiency factor.<sup>9</sup> This abrupt rate reduction, if not the sole cause, most certainly was a factor in Hamilton, AT&T, and Sorenson exiting the IP Relay market, thus reducing the services available to deaf and hard-of-hearing consumers.<sup>10</sup> MARS, in contrast, has escaped these problems, providing predictable, market-based recovery to providers for more than five years.

The *Further Notice* offers several purported rationales for shifting away from MARS in the IP CTS context, but none of these rationales survives scrutiny. The principal rationale cited is the “sharp growth in the use of IP CTS” and the concomitant “declining use of PSTN-based

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<sup>7</sup> *Structure and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8620 ¶ 1 (2013) (“*VRS Reform Order*”), review pending sub nom. *Sorenson Communications, Inc. v. FCC*, No. 13-1215 (D.C. Cir. filed July 11, 2013). The National Association of the Deaf recently filed a petition with the D.C. Circuit to intervene in support of Sorenson’s appeal in this proceeding. See *Motion of the National Association of the Deaf for Leave to File as Amicus Curiae in Support of Petitioner*, No. 13-1215 (D.C. Cir. filed Oct. 11, 2013).

<sup>8</sup> See, e.g., *Structure and Practices of the Video Relay Service Program*, Notice of Inquiry, 25 FCC Rcd 8597 (2010); *Structure and Practices of the Video Relay Service Program*, Further Notice of Proposed Rulemaking, 26 FCC Rcd 17367 (2011); *Additional Comment Sought on Structure and Practices of the Video Relay Service (VRS) Program and on Proposed VRS Compensation Rates*, Public Notice, 27 FCC Red 12959 (CGB 2012); *VRS Reform Order*, 28 FCC Rcd 8618.

<sup>9</sup> See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 28 FCC Rcd 9219, 9222 ¶ 13 (CGB 2013).

<sup>10</sup> See, e.g., News Release, Sorenson, *Sorenson to Exit IP Relay Business* (July 9, 2013), available at <http://www.hearingloss.org/content/sorenson-exit-ip-relay-business>.

CTS.”<sup>11</sup> In particular, the *Further Notice* points to the “unprecedented and unusually rapid growth” in IP CTS usage “[s]ince December 2011.”<sup>12</sup> But the shift away from PSTN-based CTS toward IP CTS does not warrant departure from the MARS model. First, the Commission has recognized – in both the *IP CTS Interim Order*<sup>13</sup> and the *Report and Order* – that the unusually sharp growth in the IP CTS sector is not a natural phenomenon likely to persist, but rather the result of specific marketing practices by one provider that the Commission has since invalidated. In fact, earlier this year, the Commission stated that the uptick caused by these practices “represent[ed] a sudden and sharp departure from the trend of declining rates of growth in usage of this service over three prior years.”<sup>14</sup> It thus first adopted interim measures to prevent continued growth by barring various marketing tactics and adopting other prescriptive measures, and then revised those measures and made them permanent. These steps were specifically intended – and *expected* – to arrest the unnatural growth in IP CTS usage. There is no basis for effecting drastic change to the IP CTS compensation mechanism based on past growth when the Commission has expressed its view that such growth will not continue. And indeed the Commission’s expectation has proven accurate, since, as the Commission notes in the *Report and Order*, IP CTS usage declined an average of 3.7% per month since adoption of the interim

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<sup>11</sup> *Misuse of Internet Protocol (IP) Captioned Telephone Service Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, FCC 13-118, Report and Order and Further Notice of Proposed Rulemaking, ¶ 119 (rel. Aug. 26, 2013) (“*Report and Order or Further Notice*”), review pending sub nom. *Sorenson Communications, Inc. v. FCC*, No. 13-1246 (D.C. Cir. filed Sept. 6, 2013).

<sup>12</sup> *Further Notice* ¶ 118 (citation omitted).

<sup>13</sup> *Misuse of Internet Protocol (IP) Captioned Telephone Service*, Order and Notice of Proposed Rulemaking, 28 FCC Rcd 703 (2013) (“*IP CTS Interim Order*”), review pending sub nom. *Sorenson Communications, Inc. v. FCC*, No. 13-1122 (D.C. Cir. filed Apr. 8, 2013).

<sup>14</sup> *IP CTS Interim Order*, 28 FCC Rcd at 707 ¶ 7.

IP CTS rules.<sup>15</sup> The Commission should instead be appropriately focused on enforcing the new IP CTS rules it has adopted rather than expending resources re-inventing a rate mechanism that is not broken.

Second, the very premise of the suggestion that growth has rendered MARS rates invalid is wrong. The *Further Notice* suggests that “given the rapidly increasing demand for the IP version of this service, while demand for the PSTN version is declining, per-minute costs for the two versions may also be diverging....”<sup>16</sup> That logic might hold for a capital-intensive service whose costs are predominantly fixed rather than variable. In that case, greater volumes permit the provider to spread the same fixed costs over more and more minutes of use, with no (or almost no) additional (“marginal”) costs accruing for each additional minute, such that services with different usage figures would indeed exhibit divergent per-minute costs. But CTS is not such a business. The vast majority of costs associated with CTS (in both its PSTN-based and IP varieties) are attributable to labor, not capital. Moreover, the costs are incremental – i.e., the provider incurs these costs as usage grows. Thus, whereas the “per minute” cost of a capital-intensive service such as basic telephony might be cut in half when usage doubles, the cost of providing 100,000 minutes of IP CTS is likely to be substantially more than the cost of providing 50,000 minutes due to additional labor costs to handle the increase in minutes, such that the “per minute” cost will not drop nearly as much (or at all). Moreover, the labor activities that

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<sup>15</sup> *Report and Order* ¶ 96 (“[C]all data submitted by providers to RLSA for the three months immediately following the effective date of the rule indicate that usage of IP CTS, which had been growing rapidly, is no longer climbing. Specifically, although prior to the release of the interim rules in February 2013, the IP CTS program was experiencing an average growth of 7.5 percent per month over the previous 13 months, for a total growth of 97 percent, since publication of the interim rules, the program has seen an average of 3.7% decline per month.”).

<sup>16</sup> *Further Notice* ¶ 120.

contribute to IP CTS are precisely the same as those used to provision PSTN-based CTS.<sup>17</sup> For these reasons, per-minute PSTN-based CTS costs are likely to reflect per-minute IP CTS costs, even if the number of minutes of use used to make the underlying calculations differ substantially.

Nor does the inability to forecast future IP CTS usage justify a repudiation of the MARS methodology. A failure to estimate future usage will have much less consequence in the context of a labor-intensive product such as CTS than in a capital-intensive product, because an increase in volumes will result in a concomitant increase in costs, such that *per-minute costs* change very little or not at all. In any event, even if this were not the case, the MARS methodology itself guards against flawed forecasting by relying on market forces to set rates: MARS rates are based on competitively bid rates at the state level. When making those bids, providers have a strong financial incentive to forecast their costs accurately, so that they can bid at rates that recoup those costs but nevertheless beat out competitors' bids. Providers have every reason to work hard to assess their costs and to bid accordingly, lest they lose a contract or find themselves "in the red." In fact, the Commission itself relied on this point in determining that MARS was superior to methodologies based on provider forecasts: It noted that those non-market approaches provided incentives "to underestimate minutes of use," whereas MARS, "because it is based on competitively bid state rates, produces a rate that better approximates providers' reasonable costs, and therefore promotes the efficient recovery of all costs."<sup>18</sup>

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<sup>17</sup> As Consortia Consulting explains in the Report provided with these comments, although IP CTS involves an IP link rather than a PSTN link, "the provider continues to send to the consumer the text of what the other party is saying. Thus, the speech to text technology is the same and the CA's work flow and wages are the same for IP CTS and [PSTN-based] CTS." Consortia Consulting Report at 3 (attached hereto as Exhibit 1) ("Consortia Report").

<sup>18</sup> *MARS Order*, 22 FCC Rcd at 20150 ¶¶ 17-18.

In short, MARS has been a success, and promises to continue benefiting the public interest. In contrast, the purported “price cap” methodology urged by Sorenson is badly flawed and not appropriate for IP CTS ratemaking. The approach’s principal weakness is that, in contrast to most moves to price-cap regulation (which reflect transitions from rate-of-return regulation), Sorenson’s proposal would shift rates *away* from market-clearing prices, not *towards* them. Sorenson’s Petition quotes at length from the Commission’s 1989 decision migrating AT&T toward price caps (also known as “incentive regulation”), emphasizing the Commission’s view that the new approach would “replicate more accurately *than rate of return* the dynamic, consumer-oriented process that characterizes a competitive market.”<sup>19</sup> But IP CTS rates are not currently developed using a rate-of-return methodology; they are developed using MARS, which is based on competitive bidding. Such bidding *already* “incentiviz[es] providers to lower costs, gives predictability to providers so that they may allocate resources to programs that will reduce costs in the future, and simplifies the rate setting process”<sup>20</sup> Likewise, competitive bidding already “force[s]” providers “to seek efficiencies just to keep margins from shrinking.”<sup>21</sup> There is no need to move to a more regulatory mechanism meant to *emulate* the market: MARS develops market rates today, without the need to conduct lengthy and costly proceedings every three years to evaluate costs, appropriate rates of return, efficiency factors, and the like.

Sorenson’s argument that its price cap approach will lead to more “predictable” rates<sup>22</sup> is also suspect. Its Petition expressly asks the Commission to “adopt the price cap formula it successfully uses to set the IP Relay rate.”<sup>23</sup> Yet, shortly after Sorenson filed the petition, that

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<sup>19</sup> Sorenson Petition at 5 (emphasis added).

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* at 6.

<sup>22</sup> *See id.* at 5.

<sup>23</sup> *Id.* at 7.

model produced a wild fluctuation in the efficiency factor, which resulted in a 20% reduction in the IP Relay rate, prompting Sorenson to exit the IP Relay market. As noted above, Hamilton and AT&T made similar decisions, resulting in a dramatic reduction in the number of providers offering the service. Such market exit provides perhaps the best evidence that rates set via regulation are a poor substitute for market-based rates such as those produced via MARS: If the IP Relay rate had accurately assessed costs, providers likely would have been able to remain in the IP Relay market by receiving reasonable compensation for their services. The Commission should not risk a similar outcome in the case of IP CTS.

Further, as detailed in the attached report prepared by Consortia Consulting (“Consortia”), even if it made sense to migrate IP CTS rates to price caps (and it does not), the details of the specific plan proposed by Sorenson are arbitrary. Specifically, Sorenson proposes an annual decline in rates of 0.5 percent for the years in which the Commission does not reevaluate costs from the bottom up (years in which rates could decline by 20%, as they did for IP Relay this year). As Consortia explains, however, “[d]ecreasing the rate at an arbitrary, predetermined percentage in no way accomplishes the Commission’s goal to set the rates as close as possible to the providers’ reasonable costs of providing the service.”<sup>24</sup> Sorenson makes no effort to demonstrate why its 0.5% annual reduction is appropriate, or how providers will be able to ensure sufficient efficiency gains.<sup>25</sup> As noted above, CTS costs derive mostly from labor, not capital. Labor costs generally rise, and are not subject to efficiency gains ordinarily expected from capital. Sorenson asserts that “[p]roviders will be forced to seek efficiencies just to keep

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<sup>24</sup> Consortia Report at 2.

<sup>25</sup> In this regard, it is notable that the Commission has declined to apply an annual efficiency factor to its interstate access rates for more than 10 years, linking rates only to the Gross Domestic Product-Price Index. *See generally Access Charge Reform*, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd 12962 (2000).

margins from shrinking,” but one cannot assume success in this regard. Indeed, the TRS Fund Administrator itself has acknowledged that, “[i]n a labor intensive industry, rate-base regulation” (which of course includes price cap regulation, given that price caps begin with an assessment of the rate base) “may not provide the appropriate model of regulation.”<sup>26</sup>

Indeed, automatic reductions in rates not tied to accompanying efficiency gains would only exacerbate providers’ incentives to cut costs at the expense of service quality. For example, CSDVRS has argued that “[c]ompetitive bidding in state TRS programs have resulted in ... minimal relay service features and offerings, low-paid and poorly trained TRS communications assistants, virtually zero innovation or progress in service and related products and inadequate outreach...”<sup>27</sup> CSDVRS lacks any direct experience with the competitive bidding process, and its unsupported conclusions about the process and the services offered at the state level are incorrect. The state bidding process compels providers to satisfy the rigorous state bidding criteria, and it provides an appropriate check on service quality. In any event, even if CSDVRS were correct (which it is not), Sorenson’s price cap approach would exacerbate rather than solve the issue it raises. The MARS approach permits providers to bid at rates that will recoup their costs, reducing any incentive to sacrifice service quality. In contrast, a price cap approach featuring automatic annual price reductions will incentivize providers to reduce service quality in the name of “efficiency.”

Finally, Hamilton notes that the *Further Notice* seeks comment on possibly migrating oversight and administration of IP CTS to individual state TRS Programs.<sup>28</sup> Although Hamilton

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<sup>26</sup> Rolka Loube Saltzer Associates, Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 23 (filed May 1, 2013).

<sup>27</sup> See Comments of CSDVRS, LLC, CG Docket Nos. 10-51 and 03-123, at 12 (filed Aug. 19, 2013).

<sup>28</sup> *Further Notice* ¶¶ 131-140.

takes no position on the broader issues raised by this proposal, to the extent the Commission decides to devolve IP CTS responsibility to the states, it should also devolve to the states the responsibility for determining intrastate IP CTS rates. Under such an approach, the Commission should continue to use MARS to determine the interstate IP CTS component based on an average of intrastate IP CTS rates, given that the Commission would then have access to competitively bid intrastate rate information for the same service.

## II. A CENTRALIZED APPROACH TO IP CTS USER REGISTRATION AND VERIFICATION IS UNNECESSARY

The *Further Notice* asks whether the centralized registration and verification processes that were recently adopted for VRS should also apply to IP CTS.<sup>29</sup> While Hamilton does not oppose the user registration and eligibility<sup>30</sup> rules adopted on an interim basis earlier this year, and subsequently adopted on a permanent basis in the *Report and Order* accompanying the *Further Notice*, Hamilton wishes to reiterate its opposition to a centralized database approach to IP CTS.

As Hamilton noted in its comments in the *VRS Structural Reform* proceeding,<sup>31</sup> requiring each IP CTS provider to offer users the capability to register with the provider as a “default provider,” to populate the TRS User Registration Database (“TRS-URD”), and to query the

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<sup>29</sup> *Id.* ¶ 128.

<sup>30</sup> The *Further Notice* appears to conflate the concept of user “eligibility” with the VRS/IP Relay concept of user “verification.” *See id.* (“In the Report and Order, we establish registration and verification requirements for all IP CTS users.”). In fact, the *Report and Order* does not mention *verification* requirements at all, but instead adopts user *eligibility* requirements, either through self-certification or third party certification methods. Hamilton believes that verification and eligibility are two separate concepts, with the former being a requirement on the part of VRS and IP Relay providers to confirm that their users are validated through third party resources as actual persons with verifiable identity and address information, mainly for fraud prevention reasons. In contrast, IP CTS users are already paid subscribers of a local exchange carrier or VoIP provider. Thus, there is no need for IP CTS providers to *verify* users in the same manner that VRS and IP Relay providers must.

<sup>31</sup> *VRS Reform Order*, 28 FCC Rcd 8618.

database to ensure each user's eligibility for each call is wholly unnecessary. IP CTS users do not need a new, provider-issued ten-digit number in order to use the service, and thus do not need a default provider. IP CTS users are already registered with a local telecommunications carrier, and thus the TRS-URD would be redundant for those users.<sup>32</sup>

Other relay providers agree. A common theme in the comments and reply comments submitted in that proceeding is that a one-size-fits-all approach to the various forms of relay services is neither practical nor beneficial. The services rely on distinct technologies and network capabilities; are compensated through different rate mechanisms; are intended for and utilized by consumers facing different requirements; have different costs of providing service; and are provided pursuant to different levels of competition. Accordingly, they do not share the same challenges and should not be regulated in a uniform manner.<sup>33</sup>

In addition, as Sorenson noted in its reply comments, "Regarding application of the TRS-URD to IP CTS, as Hamilton recognizes, it makes no sense to use a database to conduct per-call validation of IP CTS users, as IP CTS numbers are generally assigned by the user's telecommunications carrier and exist outside TRS databases. Hamilton's observation also highlights that IP CTS providers have no control over when a call connects, and thus cannot delay connection pending verification."<sup>34</sup> Hamilton agrees with Sorenson's analysis on this point.

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<sup>32</sup> See Comments of Hamilton Relay, Inc., CG Docket Nos. 10-51 and 03-123, at 6-7 (filed Aug. 19, 2013).

<sup>33</sup> See *id.* at 3; Reply Comments of Convo Communications, LLC, CG Docket Nos. 10-51 and 03-123, at 25 (filed Sept. 18, 2013) (citing Hamilton's argument that rules should be service-specific).

<sup>34</sup> Reply Comments of Sorenson Communications, Inc. and CaptionCall, LLC, CG Docket Nos. 10-51 and 03-123, at 30 (filed Sept. 18, 2013) (citation omitted).

Hamilton also notes that each IP CTS provider is required under the rules to maintain, for a minimum of five years, detailed Call Detail Records.<sup>35</sup> IP CTS providers must also retain user registration and certification information for a minimum of five years.<sup>36</sup> The information retained by providers is subject to confidentiality requirements.<sup>37</sup> In addition, IP CTS providers are subject to audit by the Commission and the Office of Inspector General, and such providers must submit to annual audits or at times determined appropriate by the Commission.<sup>38</sup> In short, IP CTS providers are already required to maintain the kind of detailed information that would be included in the centralized database and to make that information available for scrutiny.

For all of these reasons, Hamilton continues to believe that the eligibility methods adopted in the permanent IP CTS rules will be sufficient to ensure the integrity of the IP CTS program without burdening users and providers with a centralized registration and validation database.

### **III. EXISTING MANDATORY MINIMUM STANDARDS SHOULD BE ENFORCED, AND NEW MANDATORY MINIMUM STANDARDS SHOULD BE ADOPTED WITH ADDITIONAL INDUSTRY INPUT**

In addition to the mandatory minimum standards that apply to relay providers generally, the Commission seeks comment on whether certain IP CTS-specific mandatory minimum requirements should be adopted. For example, the Commission asks whether minimum requirements for speed of captioning should be adopted, and if so, what the minimum speed should be and how it should be measured.<sup>39</sup>

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<sup>35</sup> 47 C.F.R. § 64.604(c)(5)(iii)(D)(7).

<sup>36</sup> *Id.* § 64.604(c)(9)(x).

<sup>37</sup> *Id.*; *see id.* §§ 64.5101-5111.

<sup>38</sup> *Id.* § 64.604(c)(5)(iii)(D)(6).

<sup>39</sup> *Further Notice* ¶ 141.

As part of this inquiry into minimum standards, the Commission notes its concern that “a practice may be emerging wherein providers summarize the conversation content of IP CTS calls. We remind providers that our rules require that all conversational content must be relayed verbatim, unless summarization is requested by the user. Noncompliance with this rule may result in denial of compensation.”<sup>40</sup>

Hamilton agrees that the summarization of conversation content, in the absence of a specific request by a user for summarization, is a cause for concern and should be dealt with strictly by the Commission. Both the Communications Act of 1934, as amended (the “Act”), and current Commission rules prohibit the intentional alteration of a relay call. Section 225(d)(1)(G) of the Act “prohibit[s] relay operators from intentionally altering a relayed conversation.”<sup>41</sup> The Commission rule promulgating this provision states: “CAs are prohibited from intentionally altering a relayed conversation and . . . must relay all conversation verbatim unless the relay user specifically requests summarization.”<sup>42</sup> Thus, it should be clear that IP CTS providers may not purposefully skip sentences in a conversation to “catch up” with the conversation or otherwise truncate the conversation through summarization, unless a user specifically requests it.

Based on information that is available to Hamilton through a Paisley Group report, Hamilton performed far better than the IP CTS industry average in terms of captioning all sentences, with the industry average missing three times as many sentences. One IP CTS provider missed five times as many sentences as Hamilton did, according to the report.<sup>43</sup>

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<sup>40</sup> *Id.* n.438.

<sup>41</sup> 47 U.S.C. § 225(d)(1)(G).

<sup>42</sup> 47 C.F.R. § 64.604(a)(2)(ii).

<sup>43</sup> Paisley Group, *Captioning Telephone Service Performance Index, Total Number of Missing Sentences* (Summer 2013).

With respect to the adoption of minimum accuracy requirements, Hamilton agrees that there is a need for clearly defined, measurable captioning standards for speed, accuracy and verbatim/summarization as noted above, and these standards should be adopted for both CTS and IP CTS. Other standards, such as defining abandoned call counts and adopting a clear definition of how to measure conversation time, must be established. Different providers may use different standards of measurement currently,<sup>44</sup> which can result in widely varying cost data. The Commission needs to harmonize these measurements, certainly before any reliable cost data can be generated for purposes of calculating a non-MARS rate for IP CTS.<sup>45</sup>

Hamilton encourages the Commission to work with industry stakeholders to develop these industry standards so that they can be implemented in a workable fashion that benefits consumers. Hamilton anticipates that it will provide additional data for the record on these points.

Hamilton would not be opposed to a requirement that IP CTS providers maintain a record of any user request for summarization. However, further recordkeeping and reporting requirements regarding speed of caption are not necessary until clear, harmonized rules are implemented. Hamilton notes that the Commission's rules already require, as part of the federal certification process, that IP CTS applicants agree to file annual compliance reports demonstrating continued compliance with Commission rules.<sup>46</sup> Such annual reports, coupled

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<sup>44</sup> See, e.g., Ex Parte Communication of Sorenson Communications, Inc., CG Docket No. 10-51, Exhibit A at 4-5 (filed Dec. 28, 2012).

<sup>45</sup> Of course, a MARS rate for IP CTS continues to be preferable. And to the extent that the Commission harmonizes these measurements across not only IP CTS but CTS as well, it would further validate the continued use of an average of intrastate CTS rates to calculate the IP CTS rate under the MARS approach.

<sup>46</sup> *Id.* § 64.606(a)(2)(iv).

with the Commission’s audit procedures, should be sufficient on an interim basis for confirming provider compliance with any IP CTS-specific mandatory minimum standards.

**IV. THE DEFAULT CAPTIONS OFF REQUIREMENT SHOULD BE RELAXED OR REVISED**

In the *Report and Order*, the Commission declined to abolish the interim rule requirement that IP CTS equipment have a default setting of “captions off” for each and every call.<sup>47</sup> However, the Commission acknowledged the potential burden that this requirement may place on consumers, and therefore it adopted a hardship waiver exception provided certain criteria are met.<sup>48</sup> Hamilton encourages the Commission to explore other means of relieving consumers of this burdensome requirement.

**A. 911 CALLS**

With respect to emergency and 911 calls, the Commission clarified that IP CTS providers may automatically turn captions on solely for 911 calls and 911 call-backs to the extent it is technically feasible to do so.<sup>49</sup> In the *Further Notice*, the Commission asks whether it is technically feasible for all IP CTS equipment to be defaulted to “captions turned on” for 911 emergency calls, and if so whether providers should be required to so configure their equipment.<sup>50</sup>

Hamilton believes that it is technically feasible to default all 911 emergency calls to captions on, and in fact Hamilton does so currently. However, Hamilton does not have access to the signaling information for 911 callbacks from emergency call centers, and therefore is unable to automatically caption such callbacks.

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<sup>47</sup> *Report and Order* ¶ 96.

<sup>48</sup> *Id.* ¶ 99-100; *see also* 47 C.F.R. § 64.604(c)(10)(iv).

<sup>49</sup> *Report and Order* ¶ 105; *see also* 47 C.F.R. § 64.604(c)(10)(v).

<sup>50</sup> *Further Notice* ¶ 146.

To address the concern that a user might inadvertently turn captions off during a 911 call, Hamilton believes that the Commission should allow providers to override the captions button during a 911 call.

*B. VOLUME CONTROL*

There are complaints in the record that certain IP CTS equipment turns off the preset amplification feature when a call ends, because the amplification feature is tied to the captions feature. In previous comments in this proceeding, HLAA suggested that “[t]he ability to manipulate the volume, or preset the volume loud enough to accommodate a hearing loss, should not be linked to the setting for the captions.”<sup>51</sup> The Commission seeks further information on this issue and asks whether volume control and captions should be required to operate independently.<sup>52</sup>

In previous models of the IP CTS equipment that Hamilton uses, the captions feature had to be turned on in order for the amplification feature to function. The IP Captel phones were set to do this based on input from state equipment distribution programs (“EDPs”). Some state EDPs were concerned that allowing full amplification with the captions feature off might encourage a person who did not need use of captions to select the Captel phone instead of an amplified phone and then to use the phone with the captions feature on. However, current IP Captel equipment models can be configured to de-link amplification and captions, as can already-deployed equipment through a software update. Accordingly, Hamilton does not oppose a requirement that IP CTS providers be prohibited from linking volume control to the captions-on feature.

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<sup>51</sup> Comments of Hearing Loss Association of America, CG Docket Nos. 13-24, 03-123, at 15 (filed Feb. 26, 2013).

<sup>52</sup> *Id.* ¶ 147.

C. ANSWERING MACHINES

Hamilton agrees with Ultratec that the “default off” setting creates inefficiencies with respect to answering machines and other recorded messages, because each time a user accesses an IP CTS voice mail message it must be captioned, and re-captioned again if the user needs to listen to the message more than once.<sup>53</sup> A more rational approach would be to waive the default captions off requirement for such messages, such that once the message has been captioned, it can be stored and replayed by the user with captions, without the need for a CA to re-caption the message. This approach will help avoid providers having to bill the TRS Fund for captions associated with replayed messages. To implement this approach successfully, the waiver would need to apply to all providers and be a requirement rather than an option. Hamilton is unaware of any technical limitations that would prevent an IP CTS provider from complying with such a requirement.

D. ALLOW USERS TO SELECT THEIR DEFAULT OPTION

The hardship that the default captions off rule has created is clear in the record. What is not clear in the record is whether permitting default captions on caused (or would cause) an increase in minutes. The Commission itself acknowledges that it is “unable to quantify the amount of IP CTS usage attributable to casual or inadvertent use of captions.”<sup>54</sup>

To rectify this, the Commission should allow users to default captions on if they choose to do so. Now that marketing practices have been tightened, now that all users must be registered, now that users must pay \$75 or more or acquire the equipment through a government program, and now that federal warning labels must be affixed to all IP CTS equipment, the time

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<sup>53</sup> *Id.* ¶ 148 (citing Ultratec Comments at 11). To Hamilton’s knowledge, all IP CTS devices are equipped with a built-in answering machine, or otherwise permit voice mail message storage.

<sup>54</sup> *Id.* ¶ 97.

has come to relieve consumers of the captions-off burden *if they elect to do so*. The default option must be in a clearly visible place on the phone, not buried in a menu tree on the phone, and phones that are defaulted to on must enable consumers to turn off the captioning with a single step.

At the very least the Commission should take incremental measures to relieve the burden where it is greatest. Hamilton supports extending the hardship waiver exception to those users who certify that they live alone. Under this approach, providers should be required to maintain records of such certifications. Hamilton believes that the Commission, using metrics that are available from the TRS Fund Administrator, can readily determine whether such waivers are causing any spike in individual or overall usage patterns, and take appropriate actions as needed to curb any perceived abuses by revoking individual waivers.

**V. ADDITIONAL ADVERTISING AND EDUCATIONAL INFORMATION NOTIFICATION REQUIREMENTS WOULD BE OVERLY BURDENSOME TO PROVIDERS AND CONSUMERS**

The *Further Notice* proposes that the federal warning labels that must be affixed to each IP CTS phone should also be added to IP CTS provider websites, advertising brochures, and other advertising and consumer informational materials.<sup>55</sup> The *Further Notice* also proposes that such websites, brochures, and materials contain statements that the captions on captioned telephones are provided by a live communications assistant and that the cost of captioning is funded through a federal program.<sup>56</sup>

Hamilton understands the Commission’s objective of ensuring that consumers receive “multiple and repeated”<sup>57</sup> sources of information regarding legitimate use of IP CTS, and

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<sup>55</sup> *Further Notice* ¶ 152.

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

Hamilton does not object to a requirement that each IP CTS provider place such warning information on their home pages. However, the burden of placing this information on all advertising and informational materials is outweighed by any benefits that might be derived from such a requirement.

As an initial matter, it is potentially stigmatizing to users to see federal warnings on informational materials, and could deter potentially legitimate users from even considering the service. In addition, there are frequently space limitations on advertising and informational materials that could render it impractical to add the full federal warning and the notices concerning live CAs and federal funding. Hamilton notes that when it provided IP Relay and VRS, which required numerous disclosures about 911 calls, default providers, and other required information, it was often difficult to find sufficient space in the materials for all of the disclosures. Hamilton is not suggesting that such disclosures are unnecessary; merely that they should be targeted to situations that will maximize their impact on the consumer, such as immediately before acquiring the equipment and before registering for the service.

Because IP CTS users will see the warning information on the face of their IP CTS phone before registering, and because they will also see the warning information while registering, Hamilton believes it will be impossible for users not to receive multiple and repeated reminders about the nature of the service, without the need for additional disclosures on each and every piece of advertising and consumer informational document.

**VI. GENERAL PROHIBITIONS SHOULD BE AVOIDED IN FAVOR OF SPECIFIC RULES THAT CREATE INDUSTRY CERTAINTY AND ARE EASIER TO ENFORCE**

Finally, the Commission notes that in the *VRS Structural Reform Order*, it adopted a general prohibition on VRS providers engaging in fraudulent, abusive, and wasteful practices. The Commission asks whether it should adopt a similar approach for IP CTS, by generally

prohibiting IP CTS providers from providing service to users who do not genuinely need the service.<sup>58</sup> Hamilton urges the Commission not to adopt general prohibitions that offer little guidance to the industry and create the potential for inadvertent violations. While they may be a laudable policy goal, general prohibitions lack clarity for providers as to what is required of them, and how they might run afoul of the general prohibition. For example, if an IP CTS user falsely certifies during the registration process, and the provider is unaware of the false certification, or has no reason to know that the certification is untrue, has the provider violated the general prohibition simply by registering that user? For these reasons, Hamilton opposes a general prohibition as proposed in the *Further Notice*.

## **VII. CONCLUSION**

As the Commission continues to refine its regulation of the IP CTS industry, it must keep in mind the ultimate goals of protecting consumers and maintaining the integrity of the TRS Fund. A number of the proposals set forth in the *Further Notice* will accomplish those goals; however, others will not. The Commission should prioritize enforcing its existing minimum mandatory standards, adopting sensible new IP CTS-specific minimum mandatory standards, and relieving the consumer burdens that have resulted from a strict application of the default captions-off requirement. As Hamilton has shown in these comments, it is unnecessary to engage in a counterproductive review of the IP CTS rate methodology, because the current MARS methodology has proven over time to be the most effective, least administratively

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<sup>58</sup> *Id.* ¶ 153.

burdensome, and competitively based representation of providers' reasonable costs for providing IP CTS.

Respectfully submitted,

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November 4, 2013

**EXHIBIT 1**

**CONSORTIA REPORT**

## Economic Analysis of the IP CTS Rate Methodology

Dan Davis<sup>1</sup>  
Edit Kranner<sup>2</sup>

November 4, 2013

### Introduction

Since 2007, the Commission has used a weighted average of state TRS rates to calculate the Multi-state Average Rate Structure (“MARS”) compensation rates for traditional TRS, Speech-to-speech, Captioned Telephone Service (“CTS”) and Internet Protocol CTS (“IP CTS”). Hamilton has supported the continued use of MARS for these services because it: a) is administratively efficient; b) is based on competitively bid intrastate rates ;) c) provides regulatory certainty to the industry; and d) provides reasonable cost reimbursements to TRS providers.

The Commission in its Report and Order and Further Notice of Proposed Rulemaking, released August 26, 2013, seeks comment on whether modifications should be made to the current methodology for IP CTS, including whether an entirely different methodology would be more appropriate.<sup>3</sup> The Commission seeks to adopt a methodology that is consistent with the principle that the process is designed to fairly compensate providers for their “reasonable” actual costs of providing service and that will result in predictability for the providers. Given there has been increasing demand for IP CTS and declining demand for CTS, the Commission is concerned that the costs for providing the two forms of captioned telephone service may be diverging. The Commission therefore seeks comment on whether the MARS rate, which reflects an average of

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<sup>3</sup> *In the Matter of Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket 13-24; In the Matter of Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Report and Order and Further Notice of Proposed Rulemaking, August 26, 2013 (“IP CTS Report and Order and FNPRM”), at para. 120.*

the per-minute intrastate rates established by the various states using competitive bidding processes, reflect the reasonable costs of providing IP CTS.

The Commission notes that although the TRS Fund administrator has calculated a proposed rate of \$1.7877 for the 2013-14 Fund year based on the CTS MARS calculation, aggregated provider submitted cost data results in a cost per minute calculation of \$1.4826 for IP CTS. This is the first year and only year in which cost data for IP CTS has been requested. The reliability of the cost information submitted to the TRS Fund administrator should be called into question, particularly in light of the significant changes in the costs that are imputed in the various per-minute IP CTS cost categories from 2011 to 2014.<sup>4</sup> For example, of the nine cost categories shown as being used to calculate the IPCTS per minute rate, six are shown to have significant absolute and/or percentage changes from 2011 to 2014. The “Other” cost category decreased from \$1.2818 in 2011 to a projected rate of \$.5534 in 2014. The “Indirect” cost category decreased from \$.2983 in 2011 to \$.1375 in 2014. The “Marketing” cost category decreased from \$.2103 in 2011 to \$.0847 in 2014. The “Outreach” cost category decreased from \$.1087 in 2011 to \$.0659 in 2014. The “Depreciation” cost category decreased from \$.0553 in 2011 to \$.0303 in 2014. **The “CA Related” cost category increased from \$.0616 in 2011 to \$.5015 in 2014.**<sup>5</sup> Given these significant changes and based on the fact that 2013 was the first year IPCTS providers submitted cost data to the TRS Fund Administrator, cost data in subsequent years should be submitted and analyzed to test the accuracy of data submitted in 2013 if the Commission decides to move away from a MARS rate calculation.<sup>6</sup> Thereafter, the FCC may have more reliable information from the TRS Fund Administrator on which to base its decision on whether moving from a CTS MARS rate calculation would result in any material change in the rate.

Of additional concern were the unusually steep increases in the growth of IP CTS minutes in 2012 and the impact that such increases had on TRS Fund outlays.<sup>7</sup> Given the unprecedented

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<sup>4</sup>*In the Matter of Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, *In the Matter of Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, Interstate Telecommunications Relay Services Fund, Payment Formula and Fund Size Estimate, Rolka Loube Saltzer Associates LLC, May 1, 2013, Exhibit 1-4.

<sup>5</sup> This unreliable result is especially problematic given the relative importance of “CA Related” cost in the provision of IP CTS service.

<sup>6</sup> For example, it is routine for provider cost data to be revised and updated one year after the initial data is submitted to the TRS Fund Administrator, based on information that was unavailable at the time of the original data submission and numerous other factors. Because this was the first year that IP CTS cost data was submitted to the Administrator, Hamilton believes that the revised data reported next year may differ significantly from the original data submitted by providers in February 2013.

<sup>7</sup> IP CTS Report and Order and FNPRM at Footnote 14.

growth in minutes, the Commission, on January 25, 2013 issued its IP CTS Interim Order, which prohibited practices which the Commission found were causing the sharp increase in IP CTS usage.<sup>8</sup> Thereafter, call data submitted by providers to the TRS Fund administrator indicated that usage of IP CTS was no longer climbing.<sup>9</sup> Although it is not possible to confirm from the data that is public record, this unprecedented growth in minutes caused by questionable marketing practices may have resulted in some volatility in some of the cost categories which will likely diminish once the growth pattern of IP CTS has again stabilized as a result of implementation of the new rules.

Given the unreliability of the cost and demand data used in calculating the \$1.4826 rate for IP CTS, we believe the Commission correctly agreed to adopt the IP CTS MARS calculation of \$1.7877 on an interim basis, at least until the impact of the new IP CTS rules becomes clearer.

As explained below, we believe the MARS-based rate is very close to the IP CTS rate that would be calculated using a price cap formula,<sup>10</sup> when such formula correctly initializes the rate and accurately reflects both inflation and efficiency. We conclude that the close approximation between the IP CTS rate that would be developed under the price cap methodology and the IP CTS rates developed under MARS validates the continued use of MARS for calculating the IP CTS per-minute rate. When compared with the price cap approach, the MARS approach continues to demonstrate superior qualities in terms of the ease of annual adoption, the assuredness of being grounded in competitive rates instead of price cap proxies, and the predictability of a rate methodology that has worked successfully for more than five years.

#### The Costs of Providing CTS and IP CTS Are Virtually the Same

As an initial matter, there is no reason to believe that the cost of IP CTS varies in any significant way from CTS. The only difference between the services is that the IP CTS consumer can use an existing voice telephone line and a broadband Internet connection whereas a CTS consumer must

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<sup>8</sup>*In the Matter of Misuse of Internet Protocol (IP) Captioned Telephone Service, CG Docket 13-24; In the Matter of Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Order and Notice of Proposed Rulemaking, January 25, 2013.* The Commission found that the expansion in usage to have been precipitated in large part by new referral programs that offered monetary rewards for the referral of customers who signed up for installation of the provider's IP CTS end user equipment. In the same Order, the Commission prohibited referrals for rewards programs. In addition, the Commission adopted new registration processes for new IP CTS users.

<sup>9</sup> IP CTS Report and Order and FNPRM at Footnote 14.

<sup>10</sup> According to 47 C.F.R 61.45(b), adjustment to prices are calculated as  $PCI_t = PCI_{t-1} [1 + w(GDPPI - X) + Z/R]$ ; Assuming no exogenous change then:  $PCI_t = PCI_{t-1} [1 + (GDPPI - X)]$ , where GDPPI= Government determined price inflation factor, X= Productivity factor, t = Year,  $P_t$  = Price in year t.

use one or two voice telephone lines. The provider continues to send to the consumer the text of what the other party is saying. In either case, specialized equipment is necessary.<sup>11</sup> The speech-to-text technology is the same for both services and the costs of the technology are the same for both services. Communications Assistants (CAs) for both services are interchangeable, with a CA handling both CTS and IP CTS calls during his or her work shift. Thus, the CA's work flow and wages are the same for IP CTS and CTS. In addition to the labor costs being the same, the call center facilities and support expenses are also the same. It is therefore unreasonable to conclude that there is any significant difference in the costs for providing CTS and IP CTS. Given the lack of any substantive cost difference between the two services, it is therefore reasonable to continue using MARS to establish the IP CTS rate annually.

#### Sorenson's Price Cap Formula Is Flawed

Sorenson claims that using a price cap formula guarantees a real decrease of 0.5 percent per year.<sup>12</sup> The price cap formula referred to by Sorenson lacks citation to any rationale grounded in reality, especially in light of the fact that Sorenson acknowledges this decrease will occur even though the largest component of IP CTS costs are communications assistant wages and benefits.<sup>13</sup> Decreasing the rate at an arbitrary, predetermined percentage in no way accomplishes the Commission's goal to set the rates as close as possible to the providers' reasonable costs of providing the service. Sorenson does not provide any data to demonstrate any claim that the IP CTS rates based on the MARS formula is not an accurate reflection of the reasonable cost of providing IP CTS service.

#### Analyzing the Price Cap Approach Correctly

If the Commission is to rationally consider the possible implementation of a price cap methodology for IP CTS, it is imperative that its formula's inputs are correct and based on facts. We would recommend a rate calculation as follows:

One must first start with the suggested use of data from the years 2008, 2009 and 2010 to calculate an initial rate.<sup>14</sup> Instead of using a simple average of the rates for those years, as Sorenson did,<sup>15</sup> the average of the three years should be *weighted* by the number of minutes,

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<sup>11</sup>*In the Matter of Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities, Internet-based Captioned Telephone Service*, CG Docket No. 03-123, Declaratory Ruling, January 11, 2007, at para.14.

<sup>12</sup>*In the Matter of Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Petition for Rulemaking, February 20, 2013 (the "Sorenson Petition"), at p. 6.

<sup>13</sup>*Id.*

<sup>14</sup>Sorenson Petition, at p. 9.

<sup>15</sup>*Id.*

which results in a weighted average rate of \$1.6800. In order to calculate the rate for 2011, this weighted average rate must be adjusted for inflation for at minimum between the years of 2010 and 2011. According to the GDP Price Index, inflation was 1.845% during that time period.<sup>16</sup>This adjustment for inflation results in a rate of \$1.7110 for 2011. This rate would then be used as a starting point to apply the price cap formula.

Based on the 47 C.F.R. § 61.45(b) price cap formula, adjustment to prices from one year to another are calculated as:

$$PCI_t = PCI_{t-1} [1 + w(GDPPI - X) + Z/R];$$

Assuming no exogenous change then w, Z, and R do not apply and the formula is simplified to:

$$PCI_t = PCI_{t-1} [1 + (GDPPI - X)],$$

Where; GDPPI= Government determined price inflation factor,

X= Productivity factor,

t = Year,

P<sub>t</sub> = Price in year t.

The productivity factor is intended to capture the difference in productivity between the telecommunications industry and the average firm in the entire economy. In general, in the recent past the telecommunications industry has achieved higher labor productivity than the US economy as a whole. Therefore when using the productivity data for the entire telecommunication industry, the above formula yields prices that increase at a lower rate than the rate of inflation as measured by the GDP Price index.

In the case of IP CTS, the largest component of cost is that of labor. The cost of labor makes up about 80-85% of the total cost of providing this service, which is much higher than the share of labor cost of an average business. Due to the heavily labor intensive nature of this service, very limited opportunities exist for further efficiencies in terms of automation. In fact, IP CTS could

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<sup>16</sup><http://research.stlouisfed.org/fred2/series/GDPCTPI>.

serve as an example of the Baumol Effect<sup>17</sup> (also known as the Baumol’s cost disease) in Economic Theory. In some labor intensive sectors that rely heavily on human interaction or activities, there is little or no growth in productivity over time, but wages still rise in response to rising compensation in the economy as a whole. As with Baumol’s classic example of a string quartet, it still takes the calling party and the called party in a CTS call the same amount of time to talk as it did 10 years ago even though the technologies used in the process may have changed. Therefore, when adjustments are made for efficiencies in the formula above, instead of using the productivity index specific to the telecommunications industry, a productivity adjustment that is more reflective of the nature of providing IP CTS service should be applied. Efficiencies that are achieved in the telecommunication industry in general are simply not achievable in providing IP CTS service. Productivity growth in providing this service is likely to be most similar to productivity increases in the call center industry. However, the Bureau of Labor Statistics does not collect productivity data specific to the call center industry. It is arguable that productivity in delivering IP CTS service is not increasing at a faster rate than productivity growth in the general economy. On the contrary, it is most likely to be increasing at a slower rate. In that case, the X factor in the formula above should add to the GDP inflation measure rather than take away from it. This would result in a price that grows at a somewhat higher rate than the rate of inflation in the general economy. However, due to the lack of specific data, for the purposes of the illustrative rate calculation here we assume the same productivity growth for delivering IP CTS service as for the entire economy.<sup>18</sup> Then the X factor in the formula above should be 0.

Using this assumption, the formula above needs to be modified as follows:

$$PCI_t = PCI_{t-1}(1 + GDPPI),$$

Substituting the calculated rate for 2011 and inflation data<sup>19</sup> into the equation, the rate for 2012 can be calculated as follows:

$$PCI_{2012} = 1.7110(1.01942),$$

$$PCI_{2012} = 1.7442$$

Similar adjustments for the year 2013 would result in the most current price:

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<sup>17</sup> Heilbrun, James (2003). “Baumol Cost Disease” A Handbook of Cultural Economics. Edward Elgar.

<sup>18</sup>If the Commission were to pursue this price cap methodology, consideration should be given to identifying the differences in productivity which would be associated with a highly labor intensive industry compared to the average among industries which drive the GDP and introduce an X factor into the formula which would take into account that difference.

<sup>19</sup><http://research.stlouisfed.org/fred2/series/GDPCTPI>

$$PCI_{2013}=1.7442(1.01698),^{20}$$

$$PCI_{2013}=1.7738$$

This rate of \$1.7738, which was calculated applying the price cap formula to an average initial rate that avoids the effects of the price “jump” of 2011, is not surprisingly very close to the proposed MARS rate of \$1.7877. This calculation above should therefore serve as further evidence to validate the continued use of MARS.

#### Conclusion and Recommendation

Given the unreliable cost and demand data used by the TRS Administrator in calculating an IP CTS cost per minute, the lack of record on the actual data to be used that would represent the IP CTS industry in the price cap formula, and the positive attributes of MARS as previously presented, Consortia recommends the continued use of MARS to calculate the IP CTS rate annually.

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<sup>20</sup>*Id.*